REMARKS

Claims 1 and 3-20 were pending in this application. Claims 1 and 3-14 have been canceled. Claims 15 and 17 have been amended and claims 21-31 have been added. Care has been exercised to avoid the introduction of new matter. Indeed, adequate descriptive support for the present Amendment should be apparent throughout the originally filed disclosure and claims. Applicants submit that the present Amendment does not generate any new matter issue.

Initially, Applicants respectfully request that the Attorney Docket No. be corrected. The correct Attorney Docket No. is **50103-426**.

Claims 10, 15-17 and 20 were rejected under 35 U.S.C. § 112, second paragraph. Applicants respectfully traverse.

Indefiniteness under the second paragraph of 35 U.S.C. § 112 is a question of law. *Tillotson Ltd. v Walbor Corp.*, 4 USPQ 2d 1450 (Fed. Cir. 1987). Accordingly, in rejecting a claim under the second paragraph of 35 U.S.C. § 112, the PTO is required to discharge its initial burden for providing a basis in fact and/or cogent reasoning to support the ultimate legal conclusion that one having ordinary skill in art, with the supporting specification in hand, would not be able to reasonably ascertain the scope or protection defined by the claim. *In re Cartwright*, 49 USPQ 2d 1464. Consistent judicial precedent holds that reasonable precision in light of the particular subject matter involved is all that is required by the second paragraph of 35 U.S.C. § 112. *Miles Laboratories, Inc. v. Shandon, Inc.*, 27 USPQ 2d 1123 (Fed. Cir. 1993); *North American Vaccine, Inc. v. Amercian Cyanamide Co.*, 28 USPQ 2d 1333 (Fed. Cir. 1993); *U.S. v. Telectronics, Inc.*, 8 USPQ 2d 1217 (Fed. Cir. 1988). Applicants stress that a patent

specification must be viewed through the eyes of one having ordinary skill in the art. *Miles Laboratories, Inc. v. Shandon, Inc., supra.*

In applying the above legal tenets to the exigencies of this case, Applicants submit that one having ordinary skill in the art would not have been befuddled by the use of the phrase "close to a glass transition temperature" particularly as employed in the context of the claimed invention. The specification, at page 13, lines 22 through page 14, line 4, discloses a non-limiting example of an elevated temperature for the stamper/mold that is close to the glass transition of a suitable type of thermoplastic polymer. Applicants submit that with the specification at hand, one of ordinary skill in the art would be able to reasonably ascertain the scope or protection defined by the claim.

Accordingly, one having ordinary skill in the art would not have difficulty understanding the scope of the presently claimed invention, particularly when reasonably interpreted in light of the supporting specification. The Examiner provided no technological explaining why one having ordinary skill in the art would have had difficulty understanding the claimed invention other than "it is a relative term that renders the metes and bounds of the claim unclear". Therefore, it is respectfully submitted that the imposed rejection under 35 U.S.C. § 112, second paragraph is not legally viable and hence, solicit withdrawal thereof.

Claims 1, 3-6, 10, 12-17 are rejected under 35 U.S.C. § 102(a) as being anticipated over Davis (U.S. Pat. Pub. No. 2002/0025408). Applicants respectfully traverse. Claims 1, 3-6, 10 and 12-14 have been canceled and, therefore, the rejection is moot with respect to these claims. Moreover, claims 15 and 17-31 are free from the applied art for the reasons set forth below.

The factual determination of lack of novelty under 35 U.S.C. § 102 requires the identical disclosure in a single reference of each element of a claimed invention, such that the identically

claimed invention is placed into the possession of one having ordinary skill in the art. *Helifix Ltd. v. Blok-Lok, Ltd.*, 208 F.3d 1339, 54 USPQ2d 1299 (Fed. Cir. 2000); *Electro Medical Systems S.A. v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 32 USPQ2d 1017 (Fed. Cir. 1994). There are significant differences between the claimed invention and the method disclosed by Davis that would preclude the factual determination that Davis identically describes the claimed inventions within the meaning of 35 U.S.C. § 102. Specifically, Davis fails to disclose or remotely suggest a substrate having a thermally insulating spacer in contact with the second lower surface of the substrate, as required in independent claims 15 and new independent claim 21. Davis, at numbered paragraph [0074], is silent as to a thermally insulating spacer, much less one in contact with the second lower surface of the substrate. Accordingly, the rejection under 35 U.S.C. § 102 is not legally viable, should be withdrawn and is not applicable to new claims 21-31.

Claims 1 and 3-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Chou Chou (U.S. Pat. No. 5,820,769, hereinafter "Chou '769") in view of Chou (U.S. Pat. No. 5,772,905, hereinafter "Chou '905") and Davis (U.S. Pat. Pub. No. 2002/0025408). Applicants respectfully traverse the rejection for the reasons set forth *infra*.

Claims 1 and 3-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Chou Chou (U.S. Pat. No. 5,820,769, hereinafter "Chou '769") Davis (U.S. Pat. Pub. No. 2002/0025408) and Ishida et al. (U.S. Pat. No. 6,347,016, hereinafter "Ishida". Applicants respectfully traverse the rejection for the reasons set forth *infra*.

The Examiner asserted that Chou '769 does not disclose heating the tool, but that Chou '905 discloses it is known to heat both the workpiece 20 and the tool 10. The Examiner concluded that it would have been obvious to one with ordinary skill in the art to heat the tool

because Chou '905 teaches that this is a "useful technique for thermal imprint lithography." Moreover, the Examiner stated that Chou'905 does not disclose the temperature of the workpiece or tool imprinting. The Examiner sated that Davis teaches that it is useful to maintain the tool at a constant temperature at a pre-selected elevated temperature lower than the pre-selected elevated temperature of the pre-heated workpiece. The Examiner concluded that that it would have been obvious to one with ordinary skill in the art to maintain the tool at a constant pre-selected elevated temperature lower than the pre-selected elevated temperature of the pre-heated workpiece in the modified method Chou because Davis teaches that this is useful in order to save time and reduce the embossing cycle time. Applicants respectfully traverse.

Independent claim 15, as amended, as well as new independent claim 21, each describes in pertinent part that the substrate has a thermally insulating spacer in contact with said second, lower surface thereof; and that the substrate together with the thermally insulating spacer are transferred to the stamping/imprinting tool. Applicants respectfully submit that none of the applied references discloses or suggests the use a thermally insulating spacer. It is noted that the Examiner has failed to identify where any of the applied references teach or suggest this claimed embodiment. Thus, even if the references were in some way combined, they do not teach or remotely suggest every limitation of the claimed invention. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge readily available to one of ordinary skill in the art. *In re Kotzab*, 217 F.3d 1365, 1370 55 USPQ2d 1313, 1317 (Fed. Cir. 2000); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992); *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

According to an embodiment of the present invention, when the substrate has a thermally insulating spacer, e.g., of glass, in contact with the second, lower surface thereof, the rate of temperature reduction of the heated workpiece from the pre-selected second, higher temperature is lowered relative to the rate of temperature reduction obtained in the absence of the thermally insulating spacer. See specification at page 8, lines 18-24. A key feature of the present invention, is the "process window", i.e., the maximum allowable interval between removal of the pre-heated workpiece from the separate heating means and its insertion in the stamping/imprinting tool. This window is increased by placement of a thermally insulating spacer layer beneath the lower surface of the workpiece, whereby the rate of heat loss therefrom, hence rate of temperature reduction, is reduced. See specification at page 12, line 27 through page 13, line 2. As is evident from the graphs of FIG. 5, placement of the thermally insulating spacer layer beneath the lower surface of the substrate moderates, i.e., reduces, the rate of heat loss from the substrate/workpiece after removal of the latter from contact with the heater utilized for the pre-heating step and during the interval prior to imprinting of the thermoplastic layer. As a consequence of the lower heat loss rate provided by the spacer layer, the "process window" for transfer of the heated substrate from the pre-heating block to the bottom mold of the stamper/imprinter before $T_{min.}$ is reached is substantially increased, e.g., from about 9 sec. with no glass spacer layer to about 24 sec. with a glass spacer. The increased "process window" afforded by the glass spacer layer advantageously facilitates transfer of the heated substrates/workpieces from the pre-heating station to the stamping/imprinting tool with an additional (i.e., safety) margin before unusable substrate/workpiece temperatures below the $T_{min.}$ (illustratively 140°C) are reached. See specification at page 15, line 20 through page 16, line 2.

Applicants submit that none of the applied prior art teaches or remotely suggests the

claimed embodiments recited in independent claims 15 and 21. Accordingly the rejections under 35 U.S.C. § 103(a) should be withdrawn. Lastly, Ishida does nothing to remedy the above deficiencies of either Chou '769, Chou '905 and/or Davis. Accordingly claims 1 and 3-20, as well as new claims 21-31, are free from the applied art.

It is believed that all pending claims are now in condition for allowance. Applicants therefore respectfully request an early and favorable reconsideration and allowance of this application. If there are any outstanding issues which might be resolved by an interview or an Examiner's amendment, the Examiner is invited to call Applicants' representative at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

MCDERMOTT WILL & EMERY LLP

Brian K. Seidleck
Registration No. 51,321

600 13th Street, N.W.
Washington, DC 20005-3096
(202) 756-8000 BKS:apr
Facsimile: (202) 756-8087
Date: June 21, 2004